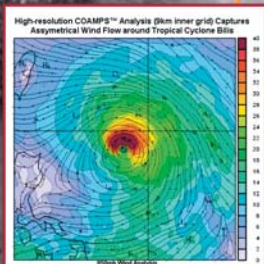


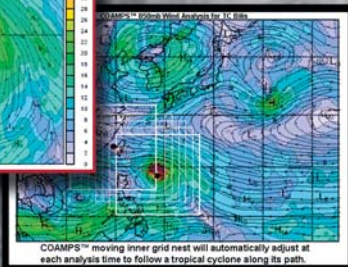
# U.S. Naval Research Laboratory

<http://www.nrlmry.navy.mil>

## NRL Tools for Tropical Cyclone Research and Prediction

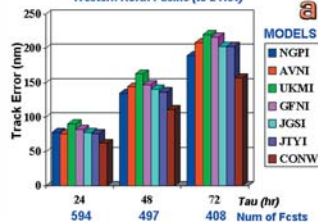


**COAMPS™**



NRL's NOGAPS, the Navy Operational Global Atmospheric Prediction System, has been the single best tropical cyclone prediction model for the western North Pacific in 2004.

2004 Tropical Cyclone Track Errors Western North Pacific (to 2 Nov)

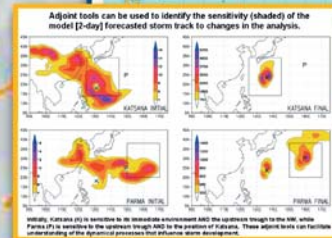


**NOGAPS and Consensus**

However, the concept of a model "consensus" forecast, proposed by NRL and shown here as CONW, has proven to be more skillful on average than relying on any single model.

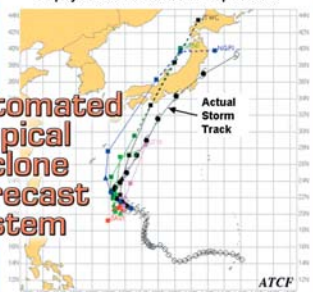


**Adjoints**



**Automated Tropical Cyclone Forecast System**

The ATCF System Enables a Forecaster to Simultaneously Display Forecast Tracks from Multiple Models



**Typhoon Ma-On**

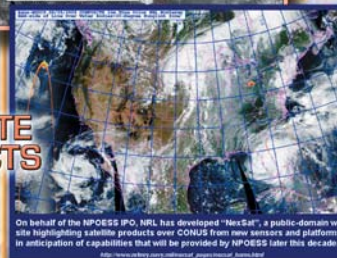
JTWC - JTWC Official Track Forecast  
NRI - FNOGAP NOGAPS Model  
GFNI - FNOGAP GFNI Model  
JTYI - Japanese Typhoon Model  
JGSI - Japanese Global Spectral Model  
JAVI - NCEP GFS Model

NRL's Automated Tropical Cyclone Forecast (ATCF) System is used by DOD and NOAA forecasters to display a variety of data and to develop analysis and forecast products.

NRL's Multi-Platform, Multisensor Satellite Products Provide Maximum Information Content in a Single View.



**SATELLITE PRODUCTS**



**NexSat Web Page**

**TC Web Page**



**Hurricane Havens Handbooks**